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ABSTRACT

Today's teachers need access to a wide range of information to function in the classroom. They need a thorough understanding of how language figures in education, and for that reason they must receive systematic and intensive preparation in educational linguistics. A thorough grounding in linguistics would support teachers' undertakings overall, and in particular in teaching literacy skills and working with English language learners. If approached coherently, such preparation would also cover many of the desired teacher competencies, relating to skills in assessing children, in individualizing instruction, and in respecting diversity. This paper lays out a rationale for why current and prospective teachers need to know more about language, and what specific sorts of knowledge they need. Requisite knowledge about oral language, oral language used in formal and academic contexts, and written language is discussed. In the final section, courses are suggested that teacher preparation programs should offer to teacher candidates. This course list may also be seen as specifying aspects of an integrated, in-depth professional development program for inservice teachers. A glossary is appended. (Contains 53 references.) (KFT)

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What Teachers Need to Know About Language

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Today's teachers need access to a wide range of information to function well in the classroom. The competencies required by the various state certification standards add up to a very long list indeed. Perhaps because this list is so long, teacher preparation programs often do not make time for substantial attention to crucial matters, choosing instead a checklist approach to addressing the various required competencies.

The challenge of providing excellent teacher preparation and ongoing professional development for teachers is enormous at any time. At a time like this, when the nation's teaching force is encountering an increasing number of children from immigrant families—children who speak little or no English on arrival at school, children whose families may be unfamiliar with the demands of American schooling—the challenge is even greater. The U.S. teaching force is not well equipped to help these children and those who speak vernacular dialects of English adjust to school and learn joyfully: Too few teachers share or know about their students' cultural and linguistic backgrounds, or understand the challenges inherent in learning to speak and read Standard English. We argue in this paper that teachers lack this knowledge because most have not had well-designed professional preparation for their current challenges.

The challenges of preparing teachers to work with immigrant and language minority children have been addressed previously. A book by Josué González and Linda Darling-Hammond (1997) entitled *New Concepts for New Challenges: Professional Development for Teachers of Immigrant Youth* provides an excellent discussion of professional development models that have been shown to work and the kinds of adaptations teachers of immigrant youth need to make. But the book deals only in passing with issues of language and literacy.

Language and literacy have been foregrounded by changes in educational policy and practice occurring over the past decade. Society has raised by quite a few notches the educational bar that all children in the United States—including newcomers—must clear in order to complete school successfully and, ultimately, to survive in the economic and social world of the 21st century. The adoption of Goals 2000 has raised curricular standards to levels that are more consistent with those in other societies. We have also adopted a system of benchmark assessments to evaluate the progress schools and students are making towards meeting those goals. In many states, policymakers have become impatient with the apparent failure of schools to educate students adequately at each level: They have ended the practice of "social promotion" whereby students are passed to the next grade each year whether or not they have met academic expectations during

the previous year. Policymakers in more than two dozen states have adopted high school proficiency examinations, tests of English language and literacy and of mathematics, with high school diplomas at stake. And finally, there are signs that "race" and ethnicity, language background, and gender will no longer be considered in admissions decisions in higher education or in hiring. The assumption is that everyone will be judged strictly on their own merits and in comparison to universally applied norms. For university entrance, this means scoring at an acceptable level on standardized tests. For advancement in the university, it means passing writing proficiency assessments. Increasingly in the workplace, it means being a competent user of Standard English and being fully literate (Murnane & Levy, 1996).

These policies place tremendous pressures on children to become skilled users of language in school and to achieve the levels of language and literacy competence required for the various assessments that constitute gateways to completing school successfully, getting into college, and finding jobs. As it stands now, language minority students are not faring well under these pressures—but then, many other students are not doing so well either. Does this mean that the new standards and assessments are unreasonable? Are students not motivated or smart enough to handle higher levels of instruction? Do teachers lack the knowledge and skills necessary to help students? What do teachers need to know and be able to do? We will argue in this paper that teachers need a thorough understanding of how language figures in education, and for that reason they must receive systematic and intensive preparation in what we will call *educational linguistics*. A thorough grounding in educational linguistics would support teachers' undertakings overall, and in particular teaching literacy skills (see Snow, Burns, & Griffin, 1998) and working with English language learners (see August & Hakuta, 1997). If approached coherently, such preparation would also, we contend, cover many of the items on that long list of desired teacher competencies, relating as it would to skills in assessing children, in individualizing instruction, and in respecting diversity.

We undertake here to present a rationale for why current and prospective teachers need to know more about language, and then we turn to a brief specification of what sorts of knowledge teachers need. This section, which constitutes the heart of this paper, discusses first requisite knowledge about oral language, then oral language used in formal and academic contexts, and then written language. In the final section, we suggest courses that teacher preparation programs should offer to teacher candidates. At the same time, this course list might be seen as specifying

aspects of an integrated, in-depth professional development program for in-service teachers.

Why Do Teachers Need to Know More About Language?

We distinguish five functions for which the prospective educator needs to know more about language than most teacher education programs provide.

1. Teacher as Communicator

Clearly, communication with students is essential in effective teaching. To communicate successfully, teachers must know how to structure their own language output for maximum clarity and have strategies for understanding what students are saying—since understanding student talk is key to analysis of what students know, how they understand, and what teaching moves would be useful. In a society that is creating increasingly diverse classrooms, teachers are more and more likely to encounter students with whom they do not share a first language or dialect and a native culture. An understanding of linguistics can help teachers see that the discourse patterns they value are aspects of their own cultures and backgrounds; they are neither universal nor inherently more valid than other possible patterns. Without such an understanding, teachers sometimes assume that there is something wrong with students whose ways of using language are not what they expect. Geneva Smitherman (1977) relates a poignant example of how teachers who do not recognize the validity of other ways of speaking can undermine their students' confidence in their own communicative abilities:

> Student (excitedly): Miz Jones, you remember that show you tole us about? Well, me and my momma 'nem—
>
> Teacher (interrupting with a "warm" smile): Bernadette, start again. I'm sorry, but I can't understand you.
>
> Student (confused): Well, it was that show, me and my momma—
>
> Teacher (interrupting again, still with that "warm" smile): Sorry, I still can't understand you.
>
> (Student, now silent, even more confused than ever, looks at floor, says nothing.)

Teacher: Now Bernadette, first of all, it's *Mrs.* Jones, not *Miz* Jones. And you know it was an *exhibit*, not a *show*. Now, haven't I explained to the class over and over again that you always put yourself last when you are talking about a group of people and yourself doing something? So, therefore, you should say what?

Student: My momma and me—

Teacher (exasperated): No! My mother and I. Now start again, this time right.

Student: Aw, that's okay, it wasn't nothin.

(Smitherman, 1977, pp. 217-218)

Studies of discourse patterns in American Indian (Philips, 1993), Native Hawaiian (Boggs, 1972), Puerto Rican (Zentella, 1997), and African American (Heath, 1983) homes and communities have shown that the speech patterns that children bring to school from their homes can be quite different from the ones that are valued at school. These speech patterns are nonetheless essential to functioning effectively in their home communities. Acquiring the academic discourse patterns of school is an important part of the educational development of all students, but it is neither necessary nor desirable to promote it at the expense of the language patterns children already have. In fact, Mrs. Jones' pedagogical approach to language development is more likely to sour children like Bernadette to the whole experience of schooling than it is to instruct them.

In as diverse a society as ours, teachers must be prepared to work with children from many different cultural, social, and linguistic backgrounds. Many students in the average school are learning English as a second language, and understanding the course of second language acquisition (including such matters as what sorts of mistakes they are likely to make and how much progress can be expected in a unit of time) helps teachers communicate with them more effectively. Even advanced speakers of English as a second language may use conversational patterns or narrative organization that differ from those of the mainstream. Understanding how their language use might differ from that of the native European-American English speaker is crucial for effective teaching. In their function as interlocuter, teachers need to know something about educational linguistics.

2. Teacher as Educator

Teachers are responsible for selecting educational materials and activities at the right level and of the right type for all of the children in their classes. This requires a reasonable basis for assessment of student accomplishments and the capacity to distinguish between imperfect knowledge of English and cognitive obstacles to learning. In order to teach effectively, teachers need to know which language problems will resolve themselves with time and which need attention and intervention. In other words, they need to know a great deal about language development.

Language is a vital developmental domain throughout the years of schooling, whatever the child's linguistic, cultural, or social background. Textbooks on child development often claim that by age five or six children have already mastered the grammar of their native language, and that although they expand their vocabularies in school and add literacy skills, for the most part children have acquired language before they go to school. Such a characterization of language development is far from accurate. All children have a long way to go developmentally before they can function as mature members of their speech communities (Hoyle & Adger, 1998). As they progress through the grades, children will acquire the grammatical structures and strategies for the more sophisticated and precise ways of using language that are associated with maturity, with formal language use, and with discussing challenging topics.

Teachers play a critical role in supporting language development. Beyond teaching children to read and write in school, they need to help children learn and use aspects of language associated with the academic discourse of the various school subjects. They need to help them become more aware of how language functions in various modes of communication across the curriculum. They need to understand how language works well enough to select materials that will help expand their students' linguistic horizons and to plan instructional activities that give students opportunities to use the new forms and modes of expression to which they are being exposed. Teachers need to understand how to design the classroom language environment so as to optimize language and literacy learning and to avoid linguistic obstacles to content area learning. A basic knowledge of educational linguistics is prerequisite to promoting language development with the full array of students in today's classrooms.

3. Teacher as Evaluator

Teachers' judgments can have enormous consequences for children's lives—from the daily judgments and responses that affect students' sense of themselves as learners to the more weighty decisions about reading group placement, promotion, or referral for evaluation. American school culture is greatly concerned with individual differences in learning ability, and judgments about ability are often based on teacher evaluations of children's language behaviors. American educators take seriously the idea that people differ in abilities and aptitudes, and they believe that such differences require different treatment in school. A lot of attention is given to sorting children by ability as early as possible. Children entering kindergarten are given readiness tests to determine which of them meet the developmental expectations of school and which do not. Some schools have "junior kindergartens" for children who are not quite ready for school according to their performance on these readiness tests. In many kindergartens, children are grouped for instruction by "ability" on the basis of such tests. If they are not grouped in this way in kindergarten, they certainly are by first grade (Michaels, 1981). Thus, well before children have had a chance to find out what school is about, they can be declared to be fast, middling, or slow learners (Oakes, 1985). Such grouping is pernicious if it sorts children globally into differentiated groups. Once sorted this way, children typically receive substantially different instructional treatment and materials, reinforcing any initial differences among them in speed of learning and eagerness to learn. Later on, students who have been in classes for academically talented children behave like gifted and talented children: They are bright, verbal, and enthusiastic about school. Those who have been in low group classes behave precisely as one would expect low-ability students to behave: They are poorly motivated, low achieving, and less enthusiastic about school than they should be.

We do not mean to suggest here that children should never be sorted for any purpose. It is very effective for teachers to form small groups of children who need more time with particular instructional foci (e.g., digraphs or vocabulary enrichment or long vowel spellings). It can also be helpful to group children who read at a similar level so they can discuss their books with one another. But the key to such grouping is that it is targeted (i.e., used for particular instructional purpose), flexible (i.e., as soon as individual children have acquired the targeted skill they leave that group), and objective (i.e., based on well-specified criteria directly related to the instructional target, not on global measures of readiness).

A serious worry about global tracking decisions is the questionable validity of the original assessments on which these placement decisions were made. Judgments of children's language and social behaviors weigh heavily in these assessments (Oller, 1992). Guided by a readiness checklist, kindergarten and first grade teachers answer questions like the following about the children in their classes: Do they know their first and last name? Can they follow simple instructions? Can they ask questions? Can they answer them? Do they know the names of the colors in their crayon boxes? Can they produce short narratives? Do they know their mother's name? Can they count to ten? The assumption is that all children at age five or six should have the abilities that are assessed, and anyone who does not is not ready for school. In reality, such abilities and skills are hardly universal nor are they indicative of learning ability. There are rather great differences across cultures in the kinds of linguistic behaviors believed to be appropriate for children at any age. The kinds of skills that children bring from home reflect those differences in belief. In some cultures, for example, children are encouraged to listen rather than to ask questions of adults. Only rude and poorly reared children would chatter away in the presence of an authority figure like the teacher. When children do not perform as requested on a test, it does not necessarily mean that they are lacking in ability—particularly so if they do not know the language in which the questions were asked. Given the diversity in our society, it is imperative to recognize that young children may differ considerably in their inventory of skills and abilities, and these differences should not be treated as reflecting deficiencies in ability.

To make valid judgments about students' abilities, teachers also need to understand the different sources of variation in language use—whether a particular pattern signals membership in a language community that speaks a vernacular variety of English, normal progress for a second language learner of English, normal deviations from the adult standard that are associated with earlier stages of development, or developmental delay or disorder. The over-representation of African American, Native American, and Latino children in special education placements suggests that use of a vernacular variety of English or normal second-language learner features is often misinterpreted as indicating developmental delay (Ortiz, 1992).

Considering the potential harm of misconstruing children's language use, investing in educational linguistics seems a wise use of teacher preparation resources.

4. Teacher as Educated Human Being

Teachers need to have access to basic information about language for the same reasons that any educated member of society should know something about language. Understanding the basics of how one's own language works contributes to skillful reading and writing. Recognizing the difference between nouns and verbs, consonants and vowels, oral and literate forms is as basic for the liberally educated human being as is knowledge about addition and subtraction, evolution, or the solar system. For students educated in the United States, basic knowledge should include knowing something about differences between the structure of English and that of other languages just as surely as knowing about the tripartite organization of the U.S. government. It used to be the case that English grammar and at least one foreign language were included in the core curriculum of middle and high school. That has changed over the last few decades. Not only are such subjects no longer required; in some places they are not taught at all.

By now several generations of teachers have gone through the public schools having had little opportunity to study the structure of English or to learn another language, and as a result, they do not feel very confident talking about language. English is the language of the society; it is the language most teachers use exclusively in their teaching; and it is the language that many teachers teach about to some extent. But how much do they know about it? Do they know its history? Do they know what languages are related to it? Do they know how it has changed over time, especially since the advent of the printing press? Do they know why there are so many peculiar spellings in English? Do they know how regional dialects develop? Teachers have practical, professional reasons to know these things, but we suggest that the attention to grammar and rhetoric that was characteristic of the trivium (the lower level of a classical education) was neither premature nor exaggerated. Everyone should understand such matters, and they will not learn them unless teachers understand them.

Throughout the United States, there is a real need for research knowledge about language teaching and learning and about other issues of language in education, and for educational leadership to ensure that this knowledge is widely shared. Several recent events involved public discussions (with participation by teachers and other educators) that were largely uninformed and uninsightful about language issues. These events include the passage of Proposition 227 in California and subsequent attempts in other states to limit or eliminate bilingual education. Discussion of Proposition 227 revealed a dismaying lack of understanding about the facts of second language learning and the nature of bilingual education.

Similarly, the Ebonics controversy raised issues that most people were ill-prepared to discuss in an informed way. Finally, the willingness of school districts and parent groups to embrace inappropriate methods for teaching reading, in response to low performance on reading tests, and to abandon theoretically sound methods for teaching English in the face of disappointing language achievement scores reminds us that too few people know enough of the basics about language and literacy to engage in reasonable discussion and to make informed decisions.

5. Teacher as Agent of Socialization

Teachers play a unique role as agents of socialization—the process by which individuals learn the everyday practices, the system of values and beliefs, and the means and manners of communication of their cultural communities. Socialization begins in the home and continues at school. When the cultures of home and school match, the process is generally continuous: Building on what they acquired at home from family members, children become socialized into the ways of thinking and behaving that characterize educated individuals. They learn to think critically about ideas, phenomena, and experiences; and they add the modes and structures of academic discourse to their language skills. But when there is a mismatch between the cultures of home and school, the process can be disrupted. We have discussed some ways in which mismatches between teachers' expectations of how children should behave communicatively and how they actually do behave can affect teachers' ability to understand children, assess their abilities, and teach them effectively. In fact, what teachers say and do can determine how successfully children make the crucial transition from home to school. It can determine whether children move successfully into the world of the school and larger society as fully participating members or get shunted onto sidetracks that distance them from family, society, and the world of learning.

For many children, teachers are the first contact with the culture of the social world outside of the home. From associations with family members, children have acquired a sense of who they are, what they can do, what they should value, how they should relate to the world around them, and how they should communicate. These understandings are cultural—they differ from group to group and even within groups. Children of immigrants and native-born American children from non-majority backgrounds may encounter a stark disjunction between their cultural understandings and those of the school. For example, Mexican children, generally have a sure sense of self within the world of the home. The center of this universe is not

the individual but the family itself. Each member is responsible for maintaining, supporting, and strengthening the family; its needs come before the needs of any individual (Valdés, 1996). For Pueblo Indian children, the central unit is the community, and its needs and requirements take precedence over those of the individual (Popovi Da, 1969).

When children from these cultures begin school, they encounter a culture that has a very different focus, one that emphasizes the primacy of the individual and considers family, group, and community needs subsidiary to individual needs. They soon discover that the school culture takes precedence over the home culture. Administrators and teachers do not accept as excuses for school absence the need to care for younger siblings when the mother is sick or to participate in a religious ritual in the community. Children learn that at school, work and progress are regarded as individual endeavors, and they are rewarded for the ability to work independently, without help and support from others.

In the area of language and communication, children who enter school with no English are expected to learn the school's language of instruction as quickly as possible, often with minimal help. Children discover very quickly that the only way they can have access to the social or academic world of school is by learning the language spoken there. The messages that are conveyed to children and their parents are that the home language has no value or role in school if it is not English, and that parents who want to help their children learn English should switch to English for communication at home. For parents who know and speak English, this would not be difficult; for parents who do not know English well or at all, it is tantamount to telling them they have nothing to contribute to the education of their children.

The process of socialization into the culture of the school need not be detrimental either to the child or to the family, even when there are substantial differences between the cultures of the home and school. When teachers realize just how traumatic the assimilation process can be for immigrant and native-born children from non-majority backgrounds, given the adjustments and accommodations they must make as they move from the world of the home to the one at school, they can ease the process considerably. Teachers who respect their students' home languages and cultures, and who understand the crucial role they play in the lives of the children and their families, can help children make the necessary transitions in ways that do not undercut the role that parents and families must continue to play in their education and development.

What Should Classroom Teachers Know About Language?

In this section, we outline a set of questions that the average classroom teacher should be able to answer, and we identify topics that teachers and other educators should have knowledge of. We focus first on questions about oral language and then on questions about written language. These questions and topics are not arcane or highly technical. We are certainly not proposing that all educators need to understand Universal Grammar, Government and Binding Theory, Minimalist Phonology, or other topics of interest to the professional linguist. Rather, we are identifying issues of language use in daily life, issues that require only a basic understanding of the descriptive work that linguists engage in and the concepts that they use. Nor do we propose a systematic way of preparing teachers with the requisite linguistic knowledge: Decisions about how to segment the information we call for—how to distribute it over preservice courses and inservice learning—and how to ensure that it will be acquired go well beyond our brief. We simply provide a (no doubt incomplete) listing of issues, and a brief justification for the relevance to classroom practice of each, in the hope that those with greater expertise in teacher education can think about how to make this knowledge available to classroom practitioners.

Attention to educational linguistics might be assumed to be of particular importance to the educator specialized in dealing with language learners—the bilingual or English as a second language (ESL) teacher. We certainly agree that prospective ESL and bilingual teachers would benefit from better, more intensive, and more coherent preparation in educational linguistics. But we contend that such preparation is equally important for all classroom practitioners and, indeed, for administrators and educational researchers—though of course the specifics of more advanced preparation will vary for these groups. Expertise on language issues related to teaching and learning is important for all educators, increasingly so as the percentage of English language learners and speakers of vernacular dialects increases among American students.

Oral Language

We begin by attending to oral language since children develop oral proficiency first in their native language (and often also in a second language). Oral language functions as a foundation for literacy and as the means of learning in school and out. However, despite its importance for learning, many teachers know much less about oral language than they need to know.

1. What are the basic units of language? Teachers need to know that spoken language is composed of units of different sizes—sounds (called phonemes if they function to signal different meanings in the language), morphemes (sequences of sounds that form the smallest units of meaning in a language), words (consisting of one or more morphemes), phrases (one or more words), sentences, and discourses. Crucial to an understanding of how language works is the idea of "arbitrariness." Sequences of sounds have no meaning by themselves—it is only by convention that meanings are attached to sound. In another language a sequence of sounds that is meaningful in English may mean nothing at all, or something quite different.

Furthermore, each language has an inventory of phonemes that may differ from that of other languages. Phonemes can be identified by virtue of whether a change in sound makes a difference in meaning. Thus, in English *ban* and *van* constitute two different words, showing that [b] and [v] are different phonemes. Similarly, *hit* and *heat* are two different words, showing that the short vowel sound [I] of *hit* is different from the long vowel sound [i] of *heat*. In Spanish, of course, the difference between [b] and [v] and between [I] and [i] does not make a difference in meaning. Native Spanish speakers may be influenced by the phonemic inventory of Spanish when they are speaking English. They might say either *very good* or *bery good* to mean the same thing. Similarly, *it is little* and *eet eez leetle* have the same meaning. Dialects of English show different phonemic patterns as well. In southern U.S. varieties, for example, the vowels in *pin* and *pen* sound the same, but in northern varieties they are different. It is clear that such contrasting phonemic patterns across languages and dialects can have an impact on what words children understand, how they pronounce words, and also how they might be inclined to spell them.

The next language unit is the morpheme. The morpheme, the smallest unit that expresses a distinct meaning, can be an independent or free unit, like *jump, dog*, or *happy*, or it can be a prefix or suffix attached to another morpheme to modify its meaning, such as *–ed* or *–ing* for verbs (*jumped,*

jumping), plural *–s* or possessive *–s* for nouns (*dogs, dog's*), or *–ly* or *–ness* added to adjectives to turn them into adverbs or nouns (*happily, happiness*). These units are called bound morphemes because they do not occur alone. The relevance of bound morphemes to teachers' understanding emerges most strongly in the domain of spelling, discussed below. But it is worth noting here that English, reflecting its origin as a Germanic language, features many irregular forms (see Pinker, 1999) that can cause problems. Children may produce ungrammatical forms using regular morpheme combinations, such as past tense *bringed* and plural *mans*. And just as it is informative to study contrasts in phoneme patterns across dialects, teachers should also be aware of dialect variation in morpheme combinations. For example, in African American Vernacular English, the plural form of *man* can be *mens*.

Teachers need to understand that grammatical units such as bound and free morphemes, words, phrases, and clauses operate quite differently across languages. The locative meanings expressed by prepositions such as *in*, *on*, and *between* in English are expressed by noun endings (bound morphemes) in Hungarian, but they are often incorporated into the structure of the verb in Korean. In Chinese, plurality and past tense are typically expressed by separate words such as *several* and *already* rather than bound morphemes (*-s* and *–ed*), but these words may be omitted if these meanings are obvious in context. The native Chinese speaker who treats plurals and past tenses as optional rather than obligatory in English is reflecting the rules of Chinese. Of course such a learner needs to learn how to produce grammatical English sentences. But understanding the variety of structures that different languages and dialects use to show meaning, including grammatical meaning such as plurality or past tense, can help teachers see the logic behind the errors of their students who are learning English.

Finally, teachers need knowledge about larger units of language use—sentence and discourse structure—that is fundamental to understanding the unique features of academic language. We have pointed out that teachers' expectations for students' participation in classroom talk may be based on their own cultural patterns. Such simple rhetorical tasks as responding to questions require making a hypothesis about why the question is being asked and how it fits into a set of social relationships that may be specific to a culture. *Can you open the door?* might be a question about physical strength or about psychological willingness, or it might be a request. If a child gives a puzzling response to a question, the teacher who knows something about cross-linguistic differences in the rules for asking questions and making requests might well be able to analyze its source. It is

critical that interpretations of language use in terms of politeness, intelligence, or other judgments about the student be informed by this understanding of language differences.

Trouble can occur at the discourse level when students do not understand teachers' expectations about academic discourse patterns that they themselves learned in school. For example, in the interactive structure typical of direct instruction, the teacher initiates, often by asking a question; a student responds; and the teacher evaluates the response. Asking a question in the response slot can risk teacher censure (Zuengler & Cole, 2000). It is unlikely that teachers are aware of their expectations for students' participation in classroom discourse. Implicit norms for language use are part of what it means to know a language well. When teachers have explicit knowledge of rhetorical structures, they have the tools for helping children understand the expectations associated with school English.

2. What's regular and what isn't? How do forms relate to each other? By virtue of being proficient English speakers and effortless readers, most adults take for granted language irregularities that can be enormously puzzling to younger and less fluent learners. Is there any difference between *dived* and *dove*? Can one similarly say both *weaved* and *wove*? Why do we say *embarrassment, shyness, likeliness,* and *likelihood,* not *embarrassness* or *embarrasshood, shyment, shyhood,* or *likeliment*? Such questions may seem anomalous, but they arise naturally during children's language development. Answers lie in principles of word formation rooted in the history of English.

An important part of acquiring a vocabulary suitable for academic contexts is learning how to parse newly encountered words into their component parts, rather than simply treating complex words as "long words." In many cases, the context in which a word is used and the recognition of familiar morphemes assist in interpreting and remembering words. There are probably thousands of words that most people learn in context without help—for example, *disinherit, pre-established, and decaffeinated*. The key here is that there are regular patterns for how word parts (morphemes) can be combined into longer words.

Teachers should be aware of the principles of word formation in English since such knowledge can aid their students in vocabulary acquisition. They should be aware, for example, of such patterns as the D/S alternation in pairs of related words like *evade* and *evasive, conclude* and *conclusive*: When they know this principle, students can learn two new words at once. Teachers should be aware of certain accent-placement regularities involving the suffixes written *-y* and *–ic*, so that they can help

students learn groups of words together: for example, *SYNonym, syNONymy, synoNYMic*; *PHOtograph, phoTOGraphy, photoGRAPHic; ÀNalog, aNÁLogy, anaLÓGic*, and so on. A mastery of the connections between the patterns of word formation and the rhythms of English speech should equip teachers to point out such patterns in academic language and enhance students' vocabulary growth.

Spanish-speaking children can be taught to use correlated morphological structures in Spanish and English to understand sophisticated English lexical items and to expand their English vocabularies. Consider the advantages for Spanish speakers who discover that a Spanish noun that ends in *-idad* almost always has an English cognate that ends in *-ity* (*natividad* and *nativity, pomposidad* and *pomposity, curiosidad* and *curiosity*) or that nouns ending in *-idumbre* relate to nouns ending in *-itude* (*certidumbre* and *certitude, servidumbre* and *servitude*). If they already know the Spanish words, the parallel to English can be pointed out; if they do not know the word in either language, the parallel Spanish and English words can be taught together.

Students who come to English as native speakers of other Indo-European languages may find it helpful to be aware of the international vocabulary of science and technology (e.g., *fotosíntesis, photosynthesis; computador, computer*). This could involve learning basic correspondences; the notion of cognate and how to distinguish cognates from false cognates and loanwords; enough about the history of English to be able to judge whether an English word is likely to have a cognate in Spanish, in Hindi, or in German; and cross-linguistic comparisons. In order to teach these matters, teachers must understand them deeply and know how to support their students' explorations when the teacher does not know the other language involved.

3. How is the lexicon acquired and structured? Almost every classroom teacher recognizes the need to teach vocabulary (the lexicon), and most teachers do so. Usually, technical or unusual words used in texts are targeted for instruction. Definitions for each one are solicited from the students or are supplied by the teacher before the text is read in interactions along these lines:

Teacher: *Digestion*: Who knows what *digestion* means?

Student: I know, I know. When you eat.

Teacher: That's right! When we eat, we digest our food. That's *digestion*!

Often, the definitions given are rather superficial and sometimes even misleading, as in this example. The definition offered here would work better for *ingestion* than for *digestion*. Presumably the text itself and the ensuing class discussion would clarify the meaning of *digestion*, but the initial instructional effort probably added little to the children's understanding. It takes many encounters with a word in meaningful contexts for students to acquire it.

What does it mean to acquire a word? What do we know when we know a word? Knowing a word involves knowing something of its core meaning. In the case of *digestion*, the core meaning is the process by which the food one eats is converted into simpler forms that the body can use for energy. But few words are unidimensional in meaning or use, so knowing a word goes well beyond knowing a definition of it. Knowing a word requires also an understanding of how it relates to similar forms (e.g., *digestion, digest, ingest, digestive, indigestion*), how it can be used grammatically (i.e., its word class and the grammatical constructions it can be used in), and how it relates to other words and concepts (e.g., *food, nutrient, stomach, digestive juices, esophagus, intestines, digesting facts, Reader's Digest*). Vocabulary instruction could be more effective if teachers understood how words are learned in noninstructional contexts, through conversational interactions, and through encounters with written language. Knowing individual words more deeply is as important as knowing more words.

For children growing up in English-speaking families, rapid English vocabulary acquisition is the rule: According to George Miller (1976; 1987), between ages 1 and 17 children add 13 words per day to their growing vocabulary, adding up to around 80,000 words by the time they are 17, and very little of this is achieved with the help of teachers or dictionaries. Vocabulary acquisition happens most easily in context and related to topics that children care about. The teacher's responsibility lies mainly in setting up exposure to language in a vivid way and encouraging reading of material that children care about.

For second-language learners, it is perhaps most valuable to stage exposure to new vocabulary items in related groups, since many words are more meaningful when they are understood in connection with other words related to the same general topic (for an accessible discussion of how the mental lexicon is thought to be organized, see Aitchison, 1994; for a discussion of how bilinguals and monolinguals differ in their treatment of words, see Merriman & Kutlesic, 1993). Thus talk about *mothers* and *fathers* should include talk about *brothers* and *sisters*, *grandfathers* and *grandmothers*; talk about *buying* should include talk about *selling*, *paying*, *money*, and *getting change*. Some understanding of how translations can

differ from one another in subtle aspects of meaning and use can aid in supporting the lexical acquisition of the second language learner.

4. Are vernacular dialects different from "bad English" and if so, how? Whether they are practitioners or researchers, educators who work or study teaching and learning in schools must have a solid grounding in sociolinguistics and in language behavior across cultures, given the diversity in social and cultural backgrounds of the students they serve. Like other languages, English has dialects associated with geographical regions and social classes, and distinguished by contrasts in their sound system, grammar, and lexicon. Standard dialects are considered more prestigious than vernacular dialects, but this evaluation is a matter of social convention alone. Vernacular dialects are as regular as standard dialects and as useful. These facts about normal language variation are not widely known, as demonstrated by the misunderstandings about language, language behavior, and language learning behind the national response to the Oakland, California, School Board's Ebonics proposal. The School Board's proposal amounted to a declaration that the language spoken in the homes of many of its African American students should be regarded as a language in its own right, and should not be denigrated by teachers and administrators as slang, street-talk, or "bad English." It further declared its support of the school district's efforts to seek funds for the Standard English Proficiency Program, which uses children's home language to teach school English. This idea was certainly not radical, but the Ebonics story continued to be news for nearly two months. It was the focus of talk shows on radio and television. It was featured in front-page newspaper stories for nearly a month, and even longer in editorial pages, political cartoons, and news magazines. The U. S. Senate held special hearings. The Oakland School Board's proposal was denounced, ripped apart, and ridiculed. Why was it controversial? As Lisa Delpit (1997) put it, when asked, "What do you think about Ebonics? Are you for it or against it?":

> My answer must be neither. I can be neither for Ebonics nor against Ebonics any more than I can be for or against air. It exists. It is the language spoken by many of our African-American children. It is the language they heard as their mothers nursed them and changed their diapers and played peek-a-boo with them. It is the language through which they first encountered love, nurturance and joy. On the other hand, most teachers of those African-American children who have been least well-served by educational systems believe that their students' life chances will be further hampered if they do not learn Standard English. In the stratified society in which we live, they are absolutely correct. (p. 6)

Schools must provide children who speak vernacular varieties of English the support they need to master the English required for academic development and for jobs when they have completed school. The process does not work when the language spoken by the children—the language of their families and primary communities—is disrespected in school. This is as true for a vernacular variety of English as it is for another language such as Navaho, Yup'ik, Cantonese, or Spanish. A recognition of how language figures in adults' perceptions of children and how adults relate to children through language is crucial to understanding what happens in schools and how children ultimately view schools and learning.

How do dialect differences affect language learning and literacy development? Even if practitioners have enough knowledge to keep speakers of vernacular dialects from being misdiagnosed and misplaced in school programs, they need a good understanding about language variability in order to make educational decisions that ensure effective instruction. Knowledge of the natural course of language acquisition and of the capacity of the individual to maintain more than one dialect is crucial in making such choices.

5. What is academic English? Although there is a lot of discussion about the need for all children to develop the English language skills required for academic learning and development, few people can identify exactly what those skills consist of or distinguish them from general Standard English skills. To the extent that this matter is examined at all, observers have usually pointed to differences between written and spoken language. However, academic English entails a broad range of language proficiency. We must ask what linguistic proficiencies are required for subject-matter learning. Is academic language proficiency just a matter of vocabulary learning, or is it more? Cummins (1981b, 1984) has described academic language as cognitively demanding, its most obvious feature being that it is relatively decontextualized. It relies on broad knowledge of words, phraseology, grammar, and pragmatic conventions for expression, understanding, and interpretation.

A recent study of prototype test items for a high school graduation examination for one of the 26 states that require an exam for graduation revealed that whatever else was being assessed, competence in the register that we refer to as academic English is necessary to pass (Wong Fillmore, 1999). The language used in this test was the language ordinarily used in textbooks and discussions about science, mathematics, literature, or social studies. To pass this test, students have to be able to do the following:

- Summarize texts, using linguistic cues to interpret and infer the writer's intentions and messages;
- Analyze texts, assessing the writer's use of language for rhetorical and aesthetic purposes and to express perspective and mood;
- Extract meaning from texts and relate it to other ideas and information;
- Evaluate evidence and arguments presented in texts and critique the logic of arguments made in them;
- Recognize and analyze textual conventions used in various genres for special effect to trigger background knowledge or for perlocutionary effect;
- Recognize ungrammatical and infelicitous usage in written language and make necessary corrections to grammar, punctuation, and capitalization;
- Use grammatical devices for combining sentences into concise and more effective new ones, and use various devices to combine sentences into coherent and cohesive texts;
- Compose and write an extended, reasoned text that is well developed and supported with evidence and details;
- Interpret word problems—recognizing that in such texts, ordinary words may have specialized meanings (e.g., that *share equally among them* means to divide a whole into equal parts); and
- Extract precise information from a written text and devise an appropriate strategy for solving the problem based on information provided in the text.

Production and understanding of academic English is an issue for English language learners and for native speakers of English alike. Few children arrive at school fully competent in the language required for text interpretation and for the kind of reasoned discourse we assume is a key to becoming an educated person. Possible exceptions are the children of academics and other highly educated professionals who use this register even at home, read a lot to their children, and engage them in discussions about a wide range of topics. For the most part, however, academic English is learned at school from teachers and from textbooks. Written texts are a reliable source of academic English, but they serve as the basis for language development only with instructional help. Teachers provide the help that students need to acquire this register when they go beyond discussions of content to discussions of the language used in texts for rhetorical and aesthetic effect.

What do teachers have to know and do to provide such instructional support? They need to know something about how language figures in academic learning and to recognize that all students require instructional support and attention to acquire the forms and structures associated with it. This is especially true for English language learners. Often explicit teaching of language structures and uses is the most effective way to help learners. Teachers must recognize that a focus on language—no matter what subject they are teaching—is crucial. They must engage children in classroom discussions of subject matter that are more and more sophisticated in form and content. And they must know enough about language to discuss it and to support its development in their students. Academic language is learned through frequent exposure and practice over a long period of time—from the time children enter school to the time they leave it.

6. Why has the acquisition of English by non-English-speaking children not been more universally successful? It appears that non-English-speaking students may be having a harder and harder time learning English. Although it used to take them from five to seven years to learn English (Cummins 1981a; Klesmer, 1994), recent studies suggest it is now taking seven to ten years (Ramírez, Pasta, Yuen, Billings, & Ramey, 1991). There are students who begin school in kindergarten classified by their school district as limited English proficient (LEP) and who leave it as LEP students 13 years later. Even highly motivated students can have considerable difficulty mastering English. The public, the press, and many educators have blamed bilingual education for the slow rate of English learning by LEP students, but the problem exists irrespective of the type of program the students are enrolled in.

California, with its current 1.4 million LEP students (California State Department of Education, 2000), has the highest concentration of such students in the nation. One out of every four students is classified as LEP. They comprise 41% of the total LEP students in the country. Many of these students have had difficulty learning English at school, and as a consequence have difficulty making academic progress. In 1998, California's voters passed Proposition 227, essentially banning bilingual education in that state. Many people who voted for this initiative believed that bilingual education made it possible for LEP students to avoid learning English (Fillmore, in press). However, there is no evidence to support that belief. Several studies (e.g., Collier, 1992; Collier & Thomas, 1989; Ramírez et al., 1991) have found that students in well-designed bilingual programs master English more rapidly (5 to 7 years) than do students in English-only programs (7 to 10 years). In 1997, slightly less than 30% of

the 1.4 million LEP students in California were receiving any form of native language support in the schools.

It is often assumed that students who do not learn English rapidly or well are mostly Spanish speakers, whose everyday interactions, even in school, are with other Spanish speakers. These students do not thrive academically, we are told, because they are not motivated to learn English or to do the work that school requires. A close look at these students suggests that this assumption is not valid. There are as many non-Spanish speakers among the group that does not learn English well as there are Spanish speakers. Many are Asians who have been in English-only classes since the time they entered school. Many of these students no longer speak their first languages even at home with family members, who may speak little English (Schmida, in preparation; Schmida & Chiang, 1999).

These students are highly motivated to learn English, and some, in fact, have done well enough in secondary school to be admitted to university. However, once they are there, it soon becomes clear that their English proficiency does not allow them to handle the language demands of university work. Robin Scarcella, who directs the English as a Second Language Program at the Irvine campus of the University of California, reports that in 1997, 60% of the freshmen who took the Subject A Exam, a competency test of English composition, failed it—a third of them because of major problems with English language skills. Some 90% of these ESL students were Asian Americans who had attended American schools for more than eight years, nearly always in English-only programs. Despite rather serious problems with English, most of them had done extremely well in school before entering the university. These were students who had earned honors in high school, ranking among the top 12% of their high school graduating classes; 65% of them had taken Honors and Advanced Placement English courses. Nevertheless, their English writing indicated that they did not have a sure sense of how English works, and consequently they had serious problems in meeting the language demands of university level work (Scarcella, n. d). What was the problem?

It appears that these students and others like them who entered school speaking little or no English have not been receiving the instruction they require to master English language structures and patterns of use. Some manage to perform well enough academically to get to the university. Most do not. They languish academically, and many drop out of school or are pushed out well before graduation (Olsen, Jaramillo, McCall-Perez, & White, 1999).

Whether or not LEP students manage to survive in school, few can learn English at the levels required for success in higher education or the workplace without instructional intervention. But for many years, teachers who work with these students have been unclear about what instructional role they should play in second language learning. Over the past two decades, some teacher education programs and in-service workshops have suggested that there is no need to teach English directly. Instead teachers have been told by experts that they should speak to children in ways that help them understand, and teach them subject matter using simplified English. They should use pictures, gestures, demonstrations and the like to allow children to acquire English naturally and automatically, and avoid indicating that they notice students' English language errors so that learners will not be self-conscious and immobilized in using the language. The message is this: Direct instruction can do nothing to change the course of language development, which is determined by internal language-acquisition mechanisms that allow learners to sort things out eventually.

Are these approaches effective? Examining how children acquire English in a variety of settings, Fillmore (1982; 1991) found that certain conditions must be met if children are to be successful. They must interact directly and frequently with people who know the language well enough to reveal how it works and how it can be used. During interactions with English learners, expert speakers not only provide access to the language at an appropriate level; they also provide ample clues as to what the units in the language are and how they combine to communicate ideas, information, and intentions. Learners receive corrective feedback as they negotiate and clarify communicative intentions (Long, 1985; Pica, 1996). The acquisition process can go awry when the conditions for language learning are not met, especially when learners greatly outnumber people who know the language well enough to support acquisition, as in schools and classrooms with high populations of English language learners.

When there is no direct instruction in such situations, children can either make little progress learning English, or they can learn it from one another (Fillmore, 1992). The outcome is "Learnerese"—an interlanguage pidgin (Schmida, 1996) that can deviate considerably from Standard English. Students who speak this variety, sometimes called "ESL Lifers," have settled into a variety of English that is fairly stable and that many of them speak fluently and with confidence. They are no longer language learners, because they are no longer working out the details of English. The following text, produced in an exchange between Schmida and a student she calls "Ti-Sang," exemplifies Learnerese. Ti-Sang had said that she does not

find it easy to communicate with her parents because she can hardly speak Khmer and they do not speak English. Asked about her cousins who had immigrated not long before from Cambodia, Ti-Sang responded,

> Hmm...they—they, like, speak Cambodian more because they more comfortable in it. They don't want to talk English sometime because—when they go to school they don't, like, really talking, right? But when at home they chatter-talk. 'Cause they kind of shy, you know, like, when the teacher call on them and they don't know the answer, sometime they know the answer but they shy to answer. If you ask them, ask them so quietly, they answer.

At age 12, Ti-Sang had been in English-only classes for eight years, from the time she entered school.

Educators must know enough about language learning and language itself to evaluate the appropriateness of various methods, materials, and approaches for helping students make progress in learning English.

Written Language

Written language is not merely oral language written down. Teachers need to know how written language contrasts with speech so that they can help their students acquire literacy. Here we discuss questions about written language that teachers should be able to answer.

7. Why is English spelling so complicated? Since the first sound in *sure* and *sugar* is different from the first sound in *sun* or *soup,* why aren't these words spelled differently? Why don't we spell the /s/ sound in *electricity* with an S? Why are there so many peculiar spellings among highly frequent words like have, said, might and could? How can OO spell three different vowel sounds, as in the vampire's favorite line that mosquitoes say when they sit down to dine, "Blood is good food!"?

These and other peculiarities of English spelling reflect two facts about English orthography:

- Unlike French, Spanish, Dutch, and many other languages, English has never had a language academy charged with regular review and reform of spelling to eliminate inconsistencies and reflect language change;
- English generally retains the spelling of morphological units, even when the rules of pronunciation mean that phonemes within these morphological units vary (e.g., *electric, electricity, electrician*)

These two forces have led to what is called a "deep orthography" for English—an orthography in which the match of sound and spelling is complex and dependent on many factors. This is not to say that English spelling is illogical, irrational, or impossible to teach. However, some insight into the forces that have generated English spelling patterns can help teachers teach more effectively and understand children's errors.

It is helpful to consider the wide array of writing systems that exist in the world's languages (see Daniels & Bright, 1996). Some languages, such as Chinese, represent morphemes or semantically meaningful units with their graphemic symbols. Others, such as the Japanese katakana system, represent syllables instead. Both of these systems (morphemic and syllabic) have the advantage of being rather easy for young children, since morphemes and syllables are psychologically more accessible units than phonemes, which are simply sounds and often are difficult to segment. In alphabetic writing systems, letters typically represent phonemes. Representing sounds alphabetically is fairly straightforward in languages that have experienced spelling reform, such as Spanish, and those that have adopted writing rather recently, such as Hmong. English, though, like Danish and German to some extent, often ignores phoneme identity to preserve the spelling identity of morphemes. For example, in English the spelling S is used for plural morphemes whether they are pronounced /s/ or /z/—even though in other contexts, such as at the beginning of words, the /s/ and /z/ sounds are spelled distinctively. Compare the spelling and pronunciation of *dogs* and *cats* to that of *zoo* and *Sue*. Similarly, the root form *electric* is retained even in forms where the final C represents quite a different sound from the /k/ in *electric*, including the /s/ of *electricity* and the /š/ of *electrician*.

The fact that the spelling *electric* is retained in all related word forms actually makes reading and inferring word meanings easier. Similarly, there is an advantage to writing T in both *complete* and *completion*, or in both *activity* and *action*, even though the sounds that it stands for vary. The spelling makes it easier to see that the two words are morphologically related. For the same reason, it is probably good that we use the same letter for the three different vowel sounds between P and T in the words *compete, competitive* and *competition*.

Other aspects of English spelling are less helpful. For example, GH in words like *night, through,* and *thought* is left over from a sound that has long since disappeared from English. Such spellings signal etymological relationships with words in other Germanic languages. English also tends to retain spellings that indicate the source of borrowed words, e.g., PH for /f/

and Y for /ai/ in Greek origin words (*phone, hypothesis*). Such patterns increase the information available to the reader, but they do exacerbate the problems of decoding and of spelling.

Some understanding of such complexities in English orthography can help teachers take sensible approaches to teaching the alphabetic principle in English. Teachers should know about the sound system of English and the history of language contact and development that has affected our writing system, because these factors can make simplistic phonics approaches inadvisable in teaching English reading.

Errors in spelling English can result from writers' inclination to write what they hear. Second language speakers' spelling errors can reflect inadequate exposure to written English forms, lack of adequate instruction in the nature of the English orthographic system, or transfer of general spelling strategies from another language. Some languages with alphabetic systems, such as Arabic or Tigrinya, are basically syllabic in their written representation: They focus on spelling the consonants in syllables, designating the vowels sketchily or omitting them entirely. Some languages, such as Spanish, with spelling systems that are quite phonemic, adjust spellings to reflect pronunciation even in closely related words (compare, for example, the related forms *saco* and *saqué*). Other languages represent historical facts in their spelling, retaining information about the source language of borrowed lexical items. Japanese is one of these. Knowing how the orthographies of different languages are organized can help teachers figure out why English spelling is so complex, precisely what is hard about English spelling for learners, and why students make certain types of errors. Understanding that there can be substantial differences in how symbols are used to represent sounds in different languages will help teachers be more effective in working with students who have had some prior literacy instruction in their native languages—students who have learned to read in Spanish, Vietnamese, French, etc., before entering an English reading program. The relationship between sounds and symbols can be relatively simple and straightforward in one language and much more complex in another.

Knowledge about language is crucial in helping teachers do a better job of teaching initial reading as well (Snow, Burns, & Griffin, 1998). Effective reading instruction requires integrating attention to the system of phoneme-grapheme mappings with attention to meaning. Children may encounter difficulties because they do not understand the basic principle of alphabetic writing—that letters represent sounds—or because they cannot segment the sounds reliably, or because they don't know the words they are expected to

be reading. Second language learners are particularly likely to find difficulties in producing, remembering, and distinguishing the target phonemes and to lack the knowledge of how words are pronounced that would help them in decoding (Ruddell & Unrau, 1997).

An additional problem arises when teachers who do not understand the complexities of English orthography give tutors or teacher aides the responsibility for teaching reading to children who need the most help (i.e., those in the lowest reading groups). These individuals are far less qualified to teach reading than are teachers. Even more problematic, teachers may assign LEP children to peer-tutors for help with reading on the grounds that children can communicate more effectively with other children than adults can. It takes a solid understanding of language to teach reading effectively, especially to children who are having the greatest difficulty grasping the abstract and complex relationships between sound and print, and the ideas they represent. Teachers cannot make the learning of English orthography effortless, but they should be clearly aware of where and why the difficulties exist.

8. Why do students have trouble with structuring narrative and expository writing? All students need to learn the rhetorical structures associated with story-telling and the various kinds of expository writing in English. However, some students bring to this task culturally based text structures that contrast with those expected at schools. The emphasis in mainstream English stories is on getting the order of events correct and clear. This emphasis can seem so obviously right to an uninformed monolingual speaker of English that the narrative of the Latino child, which emphasizes personal relationships more than plot, or of the Japanese child, who may provide very terse stories rather than recounting all of the events, can be dismissed as incomprehensible (McCabe, 1995). Different cultures focus on different aspects of an episode. Understanding a child's story requires knowing what information the child considers most important; such knowledge can help teachers guide students in acquiring the story structure valued at school.

Similarly with expository writing, argument structures vary considerably across cultures. There is no best way to make a point: Different ways make sense in different cultures. The topic sentences, paragraphs, and compare-and-contrast essays that are staples of English prose may be more difficult to learn for students whose language experience includes other structures. Understanding the absence of some of these concepts in literacy traditions associated with other languages, or the extremely differing conceptions of how any of them should be structured,

can prevent teachers from mistakenly attributing language or cognitive disorders to students who have transferred a native language rhetorical style to English.

9. How should one judge the quality and correctness of a piece of writing? Educators must have a solid enough knowledge of grammar to support children's writing development. English grammar used to be taught to students beginning in about the 5th grade and continuing through 8th grade (in what was then called grammar school). Such instruction was largely discontinued in the 1960s (except in Catholic schools). Hence, we have had three generations of teachers who as students had little exposure to the study of grammar. This does not necessarily mean that today's teachers know nothing about grammar, but few are able to teach students information about language structure that they could draw on in their writing. Nor can teachers make use of this information to pinpoint the problems many students have in writing or in interpreting text. Together with lexical knowledge, grammatical understanding is a crucial factor in understanding text. Every teacher ought to know enough about the structure of English and the ways that words can combine in sentences to be able to help students acquire such knowledge.

Partly because teachers feel insecure about their own knowledge of grammar, and partly because teachers of writing are sometimes reluctant to correct students' writing, students may not get the kind of informative feedback they must have in order to become more effective writers. The problem is particularly acute for learners of English as a second language. We have discussed above the problems encountered by many students learning English at the Irvine campus of the University of California. Some of these students reported that they had not previously received any of the explicit help with English or writing they were getting in the university. Few had any idea that they could not write in grammatically or stylistically appropriate English. It was shocking for those who had been honor students to find themselves in remedial English courses, learning some of the fundamentals of English grammar and composition.

This state of affairs is not confined to UC Irvine or to students learning English. Across the 22 campuses of the California State University System, all entering freshmen take a placement test in English and math. The failure rate on the English Placement Test across the campuses in 1998 was 47%; at one campus, it was 80% (California State University, 2000). Students who fail the test are required to take and pass remedial English courses that focus on helping them acquire the language and literacy skills required for university-level work.

Observations in high school English classes verify that many students do not receive the critique and help they need to become skillful writers. The following essay was written by a high school freshman for an honors English class. The assignment was to write an essay about the metaphoric language used in William Blake's poem, "Poison Tree." The student author, a hard-working immigrant, was not a native speaker of English.

> My metaphor for "A poison tree" is—wrath is like the seed was hiding into an apple, nobody can see it.
>
> Wrath means very angry, very angry to somebody. It may happen on you friend or you rival. But you can't see that just from the outlooking because it was hiding in your heart and just you know that. so I use "the seed was hiding into an apple, nobody can see it."
>
> First of all, I made this comparison because it is the good way to show and make people to understand the word of "wrath." Besides, then I can spend this metaphor to express my internal world. In my heart there has many wraths. Something is about the teacher; something is about my relative; and something is about love. But I almost forget it, expect one thing was happened in XYZ High School.

This essay was returned to the student with "Great work!" written at the top, and just one other mark indicating that it was less than perfect: The word *so* in the sentence beginning "so I use" was circled, indicating that it should have been capitalized. Does this student have any reason to think that he is not on course and doing well? To provide the kind of feedback that students need for polishing their writing, teachers need to understand English structure, discuss structural features of written language with their students, and explicitly teach them how to write effectively.

10. What makes a sentence or a text easy or difficult to understand? Many educators associate simple, short sentences with ease in understanding and interpretation. For that reason, texts that are prepared and selected for English language learners and other students who have trouble reading are often composed of short, choppy sentences. The result is unnatural, incoherent text conveying less substance than regular texts. One teacher described the materials being used with fourth grade ESL students as "first grade materials, very basic—it isn't see Spot run, but it's close" (Gebhard, 2000). Do greatly simplified materials help or hurt comprehension? Examination of texts that had been modified according to the readability formulas used by textbook publishers found that such texts are often more difficult to interpret (Davison & Kantor, 1982). These texts require the reader to infer meaning relations between sentences because, to

make sentences short, words and grammatical structures that show rhetorical or narrative connections between ideas are often eliminated.

The following text exemplifies the modifications found in simplified textbooks for low-achieving and ESL students:

The Tea Act of 1773

In May 1773 Parliament passed a law. It was called the Tea Act. King George wanted to help the British East India Company. The East India Company had 17 million pounds (7.65 million kilograms) of unsold tea. It was stored in English warehouses.

The Tea Act said the East India Company could sell the tea to American colonists. The tea was taxed two times. It was taxed in England. Then it was taxed again in the colonies.

The East India Company sent 1,700 chests of tea to the colonies. The colonists were not pleased. They did not like the tax. They did not want to buy the tea. Many people thought the king wanted to crush the colonists.

The Boston Tea Party

The ships filled with tea sailed into Boston Harbor on November 27. The colonists were angry. They would not let the tea be brought ashore. It had to stay on the ships. On December 16, some townspeople disguised themselves as Mohawks. At night, they boarded three ships. They dumped the tea chests into the harbor. The tea was worth £15,000. The people called this the Boston Tea Party.

Text simplification is achieved by restricting the number of words used. This text contains just 195 words, distributed among 25 sentences, including the headings. The average number of words per sentence for this text is 7.8 words. When texts are prepared with tight constraints on length, that becomes a greater concern than any other criteria that might guide the preparation of such a text—such as informativeness, relevance, coherence, naturalness, and grace. The end result is that such texts are not only uninspiring and insulting to the reader, but often less readable than the normal texts for that grade level.

Because simplified texts are often unnatural, they cannot serve as exemplars of written academic English. Well-written texts with grade-level appropriate language can give students access to the register of English that is used in academic writing. With teachers' help, students can use these texts to learn the vocabulary, grammatical structures, phraseology, and rhetorical devices that are associated with that register. Learning to understand and

produce academic English is a goal not only for LEP students but for native speakers of English too. But teachers must call students' attention to how language is used in text in order to support their language development in this domain.

Teachers and school administrators play a nontrivial role in determining how textbooks are written. Because textbook publishers can stay in business only if states and school districts adopt their materials, they tend to be attuned to what educators want. In the process of designing a series or an individual textbook, publishers produce prototype materials that they market test on school administrators whom they hope will purchase the texts, and on teachers whom they hope will select them. Educators need to develop a sure sense about what is appropriate for students at different grade levels so that they can make wise decisions in selecting and using text materials. To do that, they need to know enough about language to assess the appropriateness of the language used there, particularly for students who are learning English or who are having difficulty learning to read.

Courses Teachers Need to Take

Although we are not proposing any specific curriculum for teacher education, we offer here a listing of possible courses or course components that together cover fundamental issues in the education of English language learners and all students for whom literacy and language learning in school contexts might be problematic.

Language and Linguistics

This course would provide an introduction to linguistics motivated by such educational considerations as we have mentioned—language structure, language in literacy development, language use in educational settings, the history of English, and the basics of linguistic analysis. We envision a Language and Linguistics course for educators as different in focus from an introductory course for students of linguistics. Each area of linguistic study would be introduced by educational situations in which language is an issue. For example, the study of phonology could begin with an examination of interference problems that English language learners might have with the English sound system. It might include investigation of topics such as why speakers of Cantonese or Spanish have problems with consonant clusters at the ends of English words like *five-sixths*, which contains four consonants in a row /sIksθs/.

Language and Cultural Diversity

This course would focus on cultural contrasts in language use, particularly in teaching and learning. It would address such questions as what children learn when they acquire a language and culture, why some groups of children appear reluctant to participate in classroom discussions, and how differences in discourse styles can be accommodated in the classroom. This course would also examine different types of communication systems, including the language of deaf communities.

Sociolinguistics for Educators in a Linguistically Diverse Society

A sociolinguistic course for educators would focus on language policies and politics that affect schools, including language attitudes in intergroup relations that affect students and language values. It would also address language contact; language shift and loss or isolation; and the role and the history of dialects and bilingualism in schools and society.

Language Development

This course would introduce issues in language development, with a special focus on academic language development in school-aged children. It would address language development in native speakers of vernacular and standard English dialects, as well as those who speak other languages. The course would address the role of literacy in the development of language skills and the acquisition of the structures and vocabulary required for literacy development.

Second Language Learning and Teaching

Focusing on theoretical and practical knowledge about how second language acquisition proceeds and the factors that affect it, this course would compare second language learning to first language learning and examine the role of the primary language in second language learning. It would address second language instruction and subject- matter instruction in the language that students are acquiring. The course would address the question of how proficient children must be in a second language before they can learn to read and write in that language.

The Language of Academic Discourse

This course would focus on the language used in teaching and learning school subjects, especially the structure of academic discourse, and how this register contrasts with that of informal communication. This course would show how language production and language understanding interact with content learning—science, social science, math, and so on—and how children's language development is promoted or not based on how language is used in instructional activities.

Text Analysis and Language Understanding in Educational Settings

A course like this would examine how language structures and style in written texts affect comprehensibility. It would guide teachers in deciding what aspects of text to target for instructional attention. Special attention in this course would be given to the needs of English language learners and vernacular dialect speakers in processing text.

Conclusion

We have sketched here the reasons that educators need to know about language, the kinds of knowledge about language that they need, and an inventory of courses or course topics that would cover this crucial core of knowledge. This proposal may strike some readers as utopian. We acknowledge that we have formulated it without thinking about the structures and constraints of traditional teacher education programs. Nonetheless, we are energized by the current political situation surrounding debates about bilingual education and the rather frantic search for better methods of teaching reading. The substance of these debates gives striking testimony to the historical absence of relevant expertise on language among those who are in the best position to improve public knowledge—educational practitioners (see, for example, Pressley, 1998; Snow, Burns, & Griffin, 1998). We must now take steps to provide this preparation.

It is clear that many of the challenges we face in education stem from the fact that ours is a diverse society. Students in our schools come from virtually every corner of the planet, and they bring to school diverse outlooks, languages, cultural beliefs and behaviors, and background experiences. Teachers in our schools have not always known what to do with the differences they encounter in their classrooms. As a society, we expect teachers to educate whoever shows up at the schoolhouse, to provide

their students the language and literacy skills to survive in school and later on in jobs, to teach them all of the school subjects that they will need to know about as adults, and to prepare them in other ways for higher education and for jobs. What does it take for teachers to handle this challenge? We must be clear about what teachers have to understand about language learning and teaching in order to work effectively with their students. We have argued that basic coursework in educational linguistics is essential—the bare minimum for preparing teachers for today's schools. We must now take steps to provide this preparation.

Glossary

Cognate	A word that has similar forms in related languages
Dialect	A language variety in which sounds, grammar, and vocabulary identify speakers according to region or social class
Digraph	A letter combination that signals one sound, e.g. TH
Discourse	A language structure longer than a sentence
Etymology	The history of words
Grapheme	The smallest unit of a written language, e.g. T
Indo-European languages	A family of related languages thought to have originated in the Caucasus, including English
Interlocuter	Participant in a discourse
Lexicon	The vocabulary of a language
Locative	A term that expresses location
Morpheme	The smallest meaning-bearing language structure, e.g., *dog, -ly*
Orthography	Conventions for spelling
Perlocutionary effect	Intended effects of a stretch of language, e.g., persuasion
Phoneme	The smallest meaning-distinguishing structure of the sound system, e.g. for English, [s] [š], *see, she*
Phonology	The sounds of a language
Phraseology	Typical organization of words in a particular language into phrases and longer expressions

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Notes

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1 This is where the problem lies. Most people recognize that there can be considerable differences across individuals in ability, but not all cultures treat them differently in school. In most Asian societies, for example, children are placed in heterogeneous classrooms and are expected to learn the same curriculum, irrespective of any differences in ability. Those who need more help dealing with the materials get more help rather than an entirely different curriculum.

2 There are cultures (Wong Fillmore's for one) in which children are not told what their mother's name is, and if a child were somehow to learn it, she would never speak it or acknowledge even that she had such information.

3 The high percentage of such referrals for English language learners and vernacular dialect speakers may simply reflect teachers' strategies for getting these children extra help, often from a speech-language pathologist who is relatively well trained in language development issues. Unfortunately, labeling and subjecting children to pull-out programs to receive help may be counterproductive. If teachers knew more about language they could institute instructional processes in the classroom to address these children's needs.

4 We are grateful to Mary Eunice Romero for this reference. Popovi Da, a Pueblo leader, commenting on the relationship between the individual and the community, wrote: "Each person in Indian [Pueblo] society is born into his place in the community, which brings with it duties and responsibilities which he must perform throughout his life. Each member, old as well as young, has an important part to play in the organization of the tribe. . . . To work closely with the community gives strength and continuity to our culture and shows itself by the individual putting himself into the group, and putting the good of the group above his own desires" (1969).

5 Richard Rodriguez (1982) offers a revealing account of what happens when parents are advised to switch to a language they do not speak easily or well, for the sake of their children. He describes how the lively chatter at dinnertime was transformed into silence and how the silences in his home grew as the parents withdrew from participation in the lives of the children after teachers told them that the continued use of Spanish in the home was preventing the children from learning English.

6 In her remarkable autobiography, first published in 1945, Jade Snow Wong (1989) describes how teachers—from elementary school through college—helped her find her way and her voice as an American scholar, writer, and artist without forfeiting her Chinese language and culture.

7 National statistics for LEP students are hard to obtain and rarely up to date (see, for example, Hopstock and Bucaro, 1993). State education agencies report numbers of LEP students, but the criteria used to identify them vary across states, making comparisons difficult. The most recent national analysis of LEP student data reported by SEAs (Macias, et al., 1998) reports a total enrollment of 3,378,861 LEP students, with 1,381,393 reported for California (41% of the national total). California's State Department of Education reported a total of 1,406,166 LEP students in California out of a total national LEP student enrollment of 5,727,303 (24.6%) for school year 1997-98 (California Department of Education, Educational Demographics Unit).